Reduced Stress Through Yoga Nidra

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1 hour of Yoga Nidra = 4 hours of deep sleep
Stress

- Situational, physical, mental, or emotional
- Real or perceived
- Positive or negative
- Slowly or out of the blue

Stress and Multitasking

Connectivity Creep

Distraction Disadvantage
Stress Statistics

- Approximately 30% of Americans reported “extreme” stress levels.
- Over 60% of Americans consider work a main source of stress.
- APA 2013 national survey of top causes of stress:
  - job pressure
  - money
  - health
  - relationships
  - poor nutrition
  - media overload
  - sleep deprivation

Evolution of Autonomic Nervous System

Polyvagal Theory

- There are three general states that we exist in:
  - social engagement (myelinated)
  - fight or flight (sympathetic)
  - frozen (unmyelinated)

- Physiological responses are hierarchically organized
Autonomic Nervous System

• Sympathetic
  • Fight/Flight
  • Most fibers located in the psoas

• Parasympathetic
  • Rest/Digest
  • Largely the vagus nerve
  • Stimulated by deep breathing

Impacts of Stress on the Brain

• Amygdala (survival reaction)
• Hypothalamus (hormonal reaction)
Hypothalamus-Pituitary-Adrenal Axis

• Activation of the HPA Axis during stress
  • neuroendocrine feedback loop
  • Release of hormones
    • cortisol, epinephrine, norepinephrine

• Chronic stress can create a highly sensitized HPA axis, highly reactive ANS, and low PNS tone

Effects of Stress

• Overexposure to stress increases risk and severity of numerous health problems
• Everyone can benefit from practicing relaxation response

Effects of Stress on the Body

- **Brain and Nerves**: Headaches, feelings of despair, lack of energy, sadness, nervousness, anger, irritability, increased or decreased eating, trouble concentrating, memory problems, trouble sleeping, nervousness, depression
- **Skin**: Acne and other skin problems
- **Muscles and Joints**: Muscle aches and tension (especially in the neck, shoulders and back), increased risk of reduced bone density
- **Heart**: Faster heartbeat, rise in blood pressure, increased risk of high cholesterol and heart attack
- **Stomach**: Nausea, stomach pain, heartburn, weight gain
- **Pancreas**: Increased risk of diabetes
- **Intestines**: Constipation and other digestive problems
- **Reproductive System**: For women: irregular or more painful periods, reduced sexual desire. For men: impotence, lower sperm production, reduced sexual desire
- **Immune System**: Lowered ability to fight or recover from illness
How Do You Relax and Reduce Stress?

Stress Reduction Kit

1. Place kit on FIRM surface
2. Follow directions in circle of kit
3. Repeat step 2 as necessary, or until unconscious
4. If unconscious, cease stress reduction activity
Yoga Nidra

• Ancient Eastern teachings of Yoga (Swami Sivanada)

• State in early morning when just waking from a dream
  • Equilibrium between waking and sleep
  • “Yogic sleep”
  • Complete awareness and receptive relaxation
  • Innate intelligence and intrinsic clarity

• Releases tension (physical, mental, and emotional) through breathing, relaxation training, visualization, and meditation

Benefits of Yoga Nidra

• Resets the hypothalamus
• Heightened cortical arousability
• Reduced limbic arousability
• Heightened awareness
• Reduced emotional reaction
Benefits of Yoga Nidra

- Deep relaxation of body and mind
- Reduced stress
- Overcome insomnia/improved sleep
- Solve personal and interpersonal problems
- Resolve trauma
- Reduced anxiety, fear, anger, and depression
- Boosts the immune system
- Decreases inflammation/reduces pain
- Symptom relief related to cancer, asthma, diabetes, addictions, heart disease, and migraine headaches when used in conjunction with conventional medical care
- Helps with pre- and post-surgical conditions
- Can be used to control physical body functions such as breathing, heart rate, blood pressure, metabolism, body temperature and brain waves

Effects on Stress and Anxiety

A study on the impact on stress and anxiety through Yoga nidra

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The study aims at finding out the effect of Yoga nidra on stress and anxiety on college going students. The study conducted at the Yoga clinic of Dev Sanskriti Vishwavidyalaya. Practice time was 30 min the duration was 6 months. 53 students were taken from PG Yoga classes for observing the effect as well as 30 was in control group. The result shows a significant change in the practice group as Yoga nidra positively decreased the stress level of the male and female subjects. Several other studies prove Yoga nidra equally influences anxiety level significantly in both male and female subjects.
Effects on Nervous System Functioning

"The Yoga Nidra state reflects an integrated response by the hypothalamus resulting in decreased sympathetic nervous activity (excitatory) and increased parasympathetic (relaxatory) function."

Effects on Erythrocyte Sedimentation Rate

A study on the impact on ESR level through Yogic Relaxation Technique

Yoga nidra

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Contemporary studies show that researchers are keen to know the effect of Yoga nidra in various directions; thus it is the right time to go deep into the search of the impact of Yoga nidra. The present study aims at finding out the effect of Yoga nidra especially on ESR (Erythrocyte Sedimentation Rate) on healthy subjects. The study conducted at the Yoga Aranya Polytechnic of Dev Sanskriti Vishwavidyapeet in collaboration of Brahmavarchas Research Institute, Haridwar. Practice time of Yoga nidra was 30 minutes and the duration was 6 months. Eighty students were taken from PG Yoga classes for observing the effect as well as 30 was in control group. The present study shows a significant change on the ESR level of the normal persons as the result of Yoga nidra practice. The results are significant at 0.01 level of confidence. As the end it can be concluded that Yoga nidra positively decreases the level of ESR in the male and female subjects both.

Fig. 1—Graphical presentation of post ESR values
Effects on Heart Rate Variability

Yoga Nidra relaxation increases heart rate variability and is unaffected by a prior bout of Hatha yoga.

Abstract

OBJECTIVE: The measurement of heart rate variability (HRV) is often applied as an index of autonomic nervous system (ANS) balance and, therefore, myocardial stability. Previous studies have suggested that relaxation or mind-body exercise can influence ANS balance positively as measured by HRV but may act via different mechanisms. No studies, to the authors’ knowledge, have examined the acute response in HRV to interventions combining relaxation and mind-body exercise. The objective of this study was to compare the acute HRV responses to Yoga Nidra relaxation alone versus Yoga Nidra relaxation preceded by Hatha yoga.

DESIGN: This was a randomized, counter-balanced trial.

SETTING: The trial was conducted in a university exercise physiology laboratory.

SUBJECTS: Subjects included 22 women and men (26 ± 8.47 years of age, with a range of 18-47 years).

INTERVENTIONS: Participants completed a yoga plus relaxation (YR) session and a relaxation-only (R) session.

RESULTS: The YR condition produced significant changes from baseline in heart rate (HR; beats per minute [bpm], p<0.001) and indices of HRV: R:R (ms: p<0.001), pNN50 (%: p<0.001), low frequency (LF; %: p<0.001) and high frequency (HF; %: p<0.001). The R condition produced significant changes from baseline in heart rate (bpm: p<0.001) as well as indices of HRV: R:R (ms: p<0.001), HF (%: p<0.001), LF (%: p<0.001) and LF/HF ratio (%: p<0.001). There were no significant differences between conditions at baseline nor for the changes from baseline for any of the variables.

CONCLUSIONS: These changes demonstrate a favorable shift in autonomic balance to the parasympathetic branch of the ANS for both conditions, and that Yoga Nidra relaxation produces favorable changes in measures of HRV whether alone or preceded by a bout of Hatha yoga.

Effects on the Brain

- Increased dopamine production up to 65%
- Increased stimulation of the brain

At rest: Active frontal lobes, brain stem, and cerebellum ("ready for action")

During meditation: Active visual center, somatosensory center, and limbic system (emotions)

End of Yoga Nidra: Most activity in speech and language centers

Body part relaxation: Most activity in visual and tactile centers
8 Stages of Yoga Nidra Practice

- Internalization / Relaxation – Preliminary preparation of the body
- Affirmation (Sankalpa) – A positive affirmation is declared silently
- Rotation of Consciousness – Body part relaxation
- Respiration awareness – Awareness of the breath
- Manifestations of Opposites – Pairs of feelings and emotions are experienced
- Creative Visualization – Guided imagery
- Affirmation – Positive affirmation is repeated and programmed into the subconscious mind
- Return to Full Awareness – A careful and gradual return to a normal state

Four Levels of Practice

- Level 1: Deep relaxation. Useful for self-healing.
  - The brain first produces Alpha waves, which may verge on Theta waves during deeper practice.
- Level 2: Creativity, invention, achieving decisions/solutions to problems, creating lectures and research papers, poetry, etc.
  - The brain produces Theta waves that verge on Delta waves during deeper practice.
- Level 3: The participant experiences deep non-REM sleep, but remains aware of his or her surroundings.
  - The brain may initially produce Theta waves, followed by Delta waves.
- Level 4: During this state the practitioner may alternate between Theta and Delta waves.
References

Peer-Reviewed Journal Articles


Book


Organizations/Websites


Questions?
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